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Before the
Federal Communications Commission
Washington, DC **20554**

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Amendment of Section 73.202(b)	)	
Table of Allotments,	)	MM Docket No. 00-69
FM Broadcast Stations.	)	RM-9850
(Cheboygan, Rogers City, Bear Lake,	)	RM-9945
Bellaire, Rapid River, Manistique,	)	RM-9946
Ludington, Walhalla and	)	
Onaway, Michigan)	)	

To: Assistant Chief, Audio Division

SUPPLEMENTAL COMMENTS
NORTHERN RADIO **OF** MICHIGAN. INC.

Northern Radio of Michigan, Inc. ("Northern") hereby responds to the Commission's Request for Supplemental Information (the "Request"), DA 02-2722, released in this proceeding on October 18, 2002. The Request seeks information as to the maximum tower height that would receive the approval of the Federal Aviation Administration (the "FAA") at the reference coordinates specified by Fort Bend Broadcasting Company ("Fort Bend") in its counterproposal, denied in Cheboygan, Rogers City, Bear Lake, Bellaire, Rapid River, Manistique, Ludington, Walhalla and Onaway, Michigan, 17 FCC Rcd 8799 (MM Bur. 2002). In that counterproposal and a follow-up Petition for Reconsideration, Fort Bend urges the assignment of Channel 261C1 to Bellaire, Michigan to accommodate an upgrade of Fort Bend's Station WSRQ, Bear Lake, Michigan.

On October 21, 2002, Northern filed a Notice of Proposed Construction, FAA Form 7460-1, with the FAA's Great Lakes Regional Office in Des Plaines, Illinois.

Through that filing, Northern asked the FAA to determine whether a 1700-foot tower, the height needed for Fort Bend to achieve line-of-sight to Bellaire from the reference site,[1] would be approved at that site; and, if a 1700-foot tower would not be approved, what tower height would be acceptable at the Bellaire reference coordinates. Northern explained in its FAA filing that it did not intend to construct a tower itself, but only to obtain, in the words of the Request, a dispositive determination as to the maximum tower height that would receive FAA approval.

The FAA assigned Aeronautical Study Number 2002-AGL-5613-OE to Northern's notice. Personnel at the Great Lakes Regional Office have indicated that seven of nine departments within the regional office have completed their evaluations, but two reports remain to be filed. Northern expects that a determination will be issued within 30 days. However, informal discussions with the FAA's staff indicate that, due to the proximity of the site to the Charlevoix, Michigan airport, any tower located at Fort Bend's reference coordinates could be no higher above ground level ("AGL") than 379 feet. In its Petition for Reconsideration, Fort Bend says it needs a tower of 919.3 feet AGL (299 meters above average terrain) to achieve line of sight to Bellaire.[2] Even using Fort Bend's figures, this is 540 feet more than is likely to be approved. The FAA determination will be filed as a supplement to these comments.

The fatal airspace problems expected to be specified in the FAA's determination are explained in detail in the attached study of John P. Allen Airspace Consultants, Inc.

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[1] See Statement of William J Getz of Carl T. Jones Corporation, August 1, 2002 (attached to Northern's August 6, 2002 Opposition to Petition for Reconsideration).

[2] Fort Bend Broadcasting Company Petition for Reconsideration, July 3, 2002, Engineering Statement, page 1.

This study, which updates and amplifies a previous Allen study submitted with Northern's September 8, 2000 Reply Comments, points to multiple Part 77 airspace problems with the Bellaire proposal. Most significant are those affecting the standard instrument approaches to the Charlevoix airport, which is 6.6 nautical miles from the site. On this matter, the report concludes:

> In my expert opinion, the maximum allowable height for construction will only be 1,190 feet (362.7 meters) AMSL (412 feet (125.6 meters) AGL).

While a lesser shortfall than is expected to be reported by the FAA itself, 412 feet AGL is 507 feet less than Fort Bend says it needs.

The Allen report also shows that the Bellaire proposal would require approval by the FAA's Minneapolis Center of an 800-foot loss in "minimum vectoring altitude" within three nautical miles of the site, which would cause loss of a 3000-foot air traffic "cardinal altitude" (a loss of navigable airspace) in the area. As a result, the proposal exceeds Part 77 standards and the FAA would be justified in writing a hazard determination on that basis alone. Allen Study, pages 1, 2-3.

Northern's engineering studies, included in its September 8, 2000 Reply Comments and again in its August 6, 2002 Opposition to Petition for Reconsideration, show that line of sight to Bellaire from Fort Bend's reference coordinates cannot be achieved with an antenna height less than 1700 feet AGL. Northern does not accept Fort Bend's assertion that a 280.2-meter (919.3-foot) AGL tower is sufficient and requests that the Commission conduct its own analysis of the terrain-obstructed path between the site and Bellaire to confirm Northern's findings. However, if for the sake of discussion the FCC were to accept Fort Bend's tower height assertions, the FAA

determination to be filed by Northern, and the Allen study, will make it clear that the FAA will not permit Fort Bend to build a tower tall enough to provide service to Bellaire. For this reason, Fort Bend's counterproposal is defective and its Petition for Reconsideration should be denied.

Respectfully submitted,

NORTHERN RADIO OF MICHIGAN, INC.

By _____
Harry C. Martin

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December 2, 2002

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November 14, 2002

Mr. Bill Getz
Carl T. Jones Corporation
7901 Yarnwood Court
Springfield, VA 22153-2899

Dear Bill:

Pursuant to your request, an aeronautical evaluation was conducted near the Bay Shore, MI area for your new proposed tall antenna tower. The aeronautical evaluation was conducted in accordance with the standards for determining obstructions to the navigable airspace as set forth in Subpart C of Part 77 of the Federal Aviation Regulations.

COORDINATES: Latitude 45-20-48.00 N - Longitude 85-07-46.00 W
(NORTH AMERICAN DATUM - 27)

COORDINATES: Latitude 45-20-48.03 N - Longitude 85-07-46.21 W
(NORTH AMERICAN DATUM - 1983)

HEIGHT: 778 feet AMSL 1700 feet AGL 2478 feet AMSL

The evaluation disclosed that the proposed site was located 6.66 nautical miles from the Charlevoix Municipal Airport reference point. The controlling aeronautical surfaces for the proposed site are the potential VFR Routes, the minimum vectoring altitude and the existing instrument approach surfaces.

The proposal as specified will exceed the standards of Part 77 as follows:

77.23(a)(1) by 1200 feet, its height in excess of 500 feet AGL

77.23(a)(3) by 800 feet, as it will require Minneapolis Center minimum vectoring altitude to be increased from 2,700 feet AMSL to 3,500 feet AMSL within 3 nautical miles of the proposed site

77.23(a)(3) by 692 feet, as it will effect the missed portion of the NDB or GPS Runway 27 standard instrument approach procedure serving the Charlevoix Airport

77.23(a)(3) by 629 feet, as it will effect the holding pattern of the NDB or GPS Runway 27 standard instrument approach procedure serving the Charlevoix Airport

77.23(a)(3) by 1300 feet, as it will effect straight in portion of the NDB or GPS Runway 27 standard instrument approach procedure serving the Charlevoix Airport

77.23(a)(3) by 852 feet, as it will effect aircraft departing Runway 9 at the Charlevoix Airport and proceeding in the direction of the proposed antenna tower site

When a structure is proposed at a height in excess of 500 feet AGL, you must consider the potential of being within a VFR Route. FAA defines VFR Routes as airspace available for visual flight rule (VFR) en route navigation in accordance with the criteria contained within FAR Part 91. VFR Routes consist of identifiable well defined natural or man-made landmarks (highways, power lines, railroads, etc.), specific VOR radials (Federal Airways), and airport transition (direct routes between airports). Proposed construction within an identified VFR Route (2 statute miles on either side of the route centerline) is limited by FAA to 500 feet AGL.

To determine whether or not these routes exist, requires a complete aeronautical study by FAA, including circularization of the proposal to the aeronautical community. Based upon the received responses to the proposal, FAA will then know whether or not a VFR route exists.

NOTE: FAA does not maintain a listing of VFR Routes, they instead rely upon the aeronautical community to respond to aeronautical circulars describing the type, location and height of the proposed structure. When the responses are received by FAA, they will validate the information (radar analysis, when possible). If you are within a VFR Route FAA will allow you relocate, reduce height or accept a determination of hazard.

The next aeronautical effect is to the Minneapolis Center minimum vectoring altitude, The present minimum vectoring altitude within 3 nautical miles of your proposed site is 2,700 feet AMSL. With 1,000 feet of required obstacle clearance and with mathematical rounding the allowable overall height for construction is 1,749 feet AMSL. With a proposed height of 2,478 feet AMSL, the minimum

vectoring altitude will have to be increased from 2,700 feet AMSL to 3,500 feet AMSL. For this to happen Minneapolis Center will have to agree with the requisite change.

The requisite height increase will also cause the FAA to lose a cardinal altitude (3,000 feet AMSL). Air traffic control uses cardinal altitudes (3,000, 4,000, etc.) to effect vertical separation between aircraft. The loss of a cardinal altitude can be considered by the FAA as a compression of the navigable airspace and could lead to user delays. In either case, the FAA would be justified in writing a determination of hazard.

The next aeronautical effect deals with the instrument approach surfaces (initial, final, holding pattern and missed) for the Charlevoix Airport. The first surface is the final approach course for the NDB or GPS Runway 27 standard instrument approach procedure. The allowable height is determined by subtracting the required obstacle clearance (350 feet) from the published minimum descent altitude (1540 feet AMSL). Subtracting 350 from 1540 leaves 1190 feet AMSL (412 feet AGL) for overall construction height with a certified site survey attesting to a "2-C" accuracy standard. The next surface is the NDB or GPS Runway 9 missed portion of the instrument procedure and would allow for a 1786 feet AMSL (1008 feet AGL) construction height. The last surface is the holding pattern entry for the NDB or GPS Runway 27. With 1,000 feet of required obstacle clearance and with mathematical rounding the allowable overall height for construction is 1,849 feet AMSL (1071 feet AGL). The criteria for instrument approach procedures is contained within the United States Standard for Terminal Instrument procedures (TERPS). TERPS limits the vertical changes that can be implemented to accommodate proposed construction. The final approach portion of the effected procedure could not be changed that much to accommodate your requested height.

The last aeronautical effect is the departures from Charlevoix Airport. As it stands today, there are no restrictions or departure procedures for aircraft departing Runway 9 and proceeding in the direction of the proposed site. The FAA would be required to develop a departure restriction to accommodate the requested height. Developing departure restrictions is generally not that difficult, as most pilots do not fully understand the procedure and generally do not object. However, if the aeronautical community responds to the FAA describing the proposed alteration and advises the FAA that they can not comply,

the FAA is justified in writing a determination of hazard. The aeronautical community would have to state that in order to comply with the departure restriction they would have to either off load fuel, passengers or baggage. I have never seen this statement offered to the FAA, however, there is always a first time.

For your information, pilots have the sole responsibility to visually acquire obstacles and avoid them. However, there are times because of reduced visibility and/or low cloud ceilings the pilots can not visually acquire an obstacle and avoid it. In those circumstances the FAA is required to develop a departure restriction consisting of a cloud ceiling and visibility requirement, a rate of climb above the normal 200 feet per nautical mile or maintain a specific heading (runway heading) until leaving a specified altitude.

In conclusion, the proposal does exceed the standards of Part 71. The FAA will be required to circularize this proposal to the interested aeronautical community for their comments, prior to issuing a determination. Any proposed height above 1,190 feet AMSL (412 feet AGL) will require the FAA to adjust existing aeronautical procedures (NDB or GPS Runway 27). The potential for adjusting this aeronautical procedure to your requested height, in my opinion does not exist. Generally speaking, the FAA's Regional Office will not redesign instrument approach procedures to accommodate proposed construction. In my expert opinion, the maximum allowable height for construction will only be 1,190 feet(362.7 meters) AMSL (412 feet (125.6 meters) AGL). The probability of overcoming these objections to gain FAA approval for your tower height, in my opinion, is near zero. To sustain their Determination of Hazard for a tower height greater than 1,190 feet AMSL, the FAA is only required to demonstrate that one aeronautical operation per day would be effected by the required changes in aeronautical procedures.

If there are any questions regarding the evaluation, please do not hesitate to call.

Sincerely,

Mary C. Lowe

Mary C. Lowe
President

CERTIFICATE OF SERVICE

I, Joan P. George, a secretary with the law firm of Fletcher, Heald & Hildreth, PLC, do hereby certify that on this 2nd day of December, 2002, true copies of the foregoing Supplemental Comments were hand-delivered or mailed first-class, postage prepaid, to the following:

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